December 2, 1879.

Prof. A. Newton, F.R.S., Vice-President, in the Chair.

The Secretary made the following report on the additions to the Society's Menagerie during October 1879:—

The total number of registered additions to the Society's Menagerie during the month of October was 133, of which 2 were by birth, 93 by presentation, 30 by purchase, 4 were received in exchange, and 4 on deposit. The total number of departures during the same period, by death and removals, was 119.

The most noticeable addition during the month was

An example of Elliot's Guinea-fowl (*Numida ellioti*), purchased October 2nd. This is the first living example we have yet acquired of this peculiar Guinea-fowl, which was first described in the Society's Proceedings for 1877, p. 652, by Mr. Bartlett. It was transmitted from Zanzibar, along with other examples of the same species and examples of the Vulturine Guinea-fowl (*Numida vulturina*) and of the Mitred Guinea-fowl (*Numida mitrata*), and is from some part of the East-African coast.

A letter was read addressed to the Secretary by Mr. E. L. Layard, F.Z.S., urging the desirability of the adoption by naturalists of a fixed scale of colour in describing animals.

Mr. Tegetmeier exhibited the head of a Deer (*Cervus dama*) from which the antlers had been sawn off close to the burr. The animal had escaped shortly after this operation, and had been shot subsequently. It was then found that a new pair of antlers had grown, each one taking its origin in a ring surrounding the base of the previous cut antler, which remained attached to the skull. The new antlers were imperfectly developed, very irregular, and unsymmetrical.

The following letter was read, addressed to the Secretary by Mr. Robert B. White, C.M.Z.S., H.B.M. Acting Consul at Medellin, U. S. of Colombia.

Medellin,
U. S. of Colombia, S. A.
August 24th, 1879.

Sir,—I beg to communicate to you the following observations upon the habits of a species of Ant (*Atta cephalotes*), and upon a method of defence against the ravages of this insect.

There are two varieties of this ant recognized by the people here:—a large insect which attacks and carries off indiscriminately all classes of foliage; and an insect one third smaller, which in a similar manner attacks grasses and minor vegetation. The habits of both ants are identical; but the large kind is that which causes most injury to plantations.

Having observed that no vegetation comes amiss to this ant, that,

whether bitter, sweet, pungent, caustic, tender or tough, every thing is attacked by it, I was led to remark carefully the use to which the ant puts the enormous quantity of foliage which it carries to its nest. After watching the various foraging parties narrowly, I saw that some of them were engaged in carrying food, principally fruits or portions of fruit, sweet buds and blossoms, maize, rice, etc. Others, again, carry only portions of leaves, showing no selection in the quality, as also bits of straw, stick, and similar things. I then further remarked that the ants only employ this vegetable matter to make beds, upon which the eggs are deposited and hatched by the heat produced by the fermentation of the mass of leaves. The ants do not eat these portions of leaf; and the larvæ are fed upon selected food. When a brood has been hatched, the ants clean up their nest and carry out all the decomposed vegetable matter from the egg-beds. This they do periodically; and the half-rotten fragments of leaves may always be distinguished from the pellets of earth &c. which the ants ordinarily bring out of their excavations. This hotbed matter is also always thrown out in heaps apart, and in large ant-hills often amounts to ten bushels and upwards.

The only efficacious remedy which the farmer has hitherto used against these enemies is the extermination of the ant-colony, which is effected by digging out the nest, flooding it with water or poisoning its inmates with sulphur or acid. But it is often impossible to put this plan in practice—where a clearing or plantation is surrounded by forests or uncultivated ground, in which hundreds and thousands of ant-hills are to be found. I have tried, as many people before me, all sorts of schemes, including the use of all the abominable-smelling and tasting compounds which can be used without killing the plants which one wishes to protect, and have found all inefficacious.

But it seems that the real remedy is near at hand; and it was shown to me by a negro.

When a plantation or garden is attacked, all one has to do is to procure a bushel or so of the decayed leaf beds thrown out of an ant-hill entirely unconnected with that from which the invading ants proceed, and scatter this matter on the ant-roads and about the plantation.

The effect is miraculous. A panic siezes the ants. They drop their burdens instantly; the word is passed along the roads; and empty-handed the whole army hurries off to the nest. They will not return to the same plantation for many weeks; and even then they avoid all spots in which traces of this (to them) offensive matter may remain. The smallest dose suffices; and a bushel of rotten bedding will defend acres of ground. But care must be taken, as remarked, to procure this matter from a distinct ant-hill. If it be from the same nest, the ants take no notice of it.

I have seen this plan tried repeatedly during the last few months, and it has never failed. The biggest army of ants, engineers, pioneers, directors-general and all, is utterly discomfited by this simple means of defence. What the ants see in it I cannot say; but I fancy that they imagine themselves to be in danger of being

attacked by another set of ants, and hurry off to protect their nest. By repeatedly applying the same matter to a nest, the ants at last become so annoyed that they emigrate, carrying their females and eggs to a distance and forming a new colony.

This plan is not generally known, even here in the State of Antioquia; and I have thought that our colonists might profitably be made acquainted with it. By its use we may ward off an unexpected attack by the invader until an opportunity offers of exterminating the brood; and when this cannot be done, it may constitute the only means of defence for crops.

The vegetable matter spoken of is naturally an excellent manure, as I have observed in the case of rose-bushes which I have protected by its use.

Should you consider the above observations to be useful, I trust that you will be so good as to make them known to the Society.

I am, Sir,

Your obedient servant,

ROBERT B. WHITE.

The following papers were read:—

1. Notes on some Species of Chiroptera from Zanzibar, with Descriptions of new and rare Species. By G. E. DOBSON, M.A.

[Received October 6, 1879.]

To the kindness of Dr. Robb, H.M. Indian Army, I owe the material which has furnished the following notes. Seven species are represented in the collections; and all the specimens are well preserved in alcohol.

1. EPOMOPHORUS MINOR, n. sp.

With the exception of *Ep. pusillus*, this is the smallest species of *Epomophorus* yet discovered. In the form of the palate-ridges it certainly very closely resembles *E. macrocephalus*, the ridges being similarly shaped, the fifth ridge[1] having, in most specimens, the same peculiar lozenge-shaped depression in the centre, hitherto considered by me to be characteristic of that species. The head, however, is of very different proportions, being comparatively much smaller; and there is less difference between the males and females in the length of the muzzle; the width of the palate is also greater in proportion to its length.

Tail rudimentary, but distinct, about quarter of an inch in length.

Fur greyish-brown, with a slightly yellowish tinge both above and beneath; paler beneath, but no white patch on the abdomen of

[1] See Catal. Chiropt. Brit. Mus. 1878, pl. ii. fig. 2.